

Q6
air discharge valve rod holder 79. The air discharge valve element 51 is always urged by the spring 81 so as to be in the closing position where the element is closely contacted with the valve seat 50a of the air discharge valve chamber 50. The air discharge valve element 51 is airtightly contacted with the valve seat 50a via an O-ring 82. As shown in Fig. 15, the O-ring 82 is fitted into an arcuate groove 83 formed in a corner portion of the front end face of the air discharge valve element 51, whereby the O-ring is lockedly attached to the valve element.--

IN THE CLAIMS:

Please cancel claims 1-6 without prejudice or disclaimer of the subject matter thereof.

Please add the following new claims:

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Subcl> 7. A fluid apparatus for a semiconductor producing apparatus having a bellows configured as a pump and placed in a pump body, said bellows made of polytetrafluoroethylene including extending and contracting portions configured by forming ridge-like folds and valley-like folds in a vertically alternate and continuous manner, which are extendingly and contractingly deformable in an axial direction said axial direction defining a vertical axis, a liquid chamber formed inside said bellows, a suction port and a discharge port formed in an inner bottom face of said pump body facing said liquid chamber, wherein:

liquid is sucked from said suction port into said liquid chamber by extension of said bellows, and the liquid in said liquid chamber is discharged from said discharge port by contraction of said bellows;

said extending and contracting portion of said bellows is formed into a shape in which a lower one of upper and lower lamella portions of each of said ridge-like folds is

inclined downwardly toward said vertical axis, not only in an extending state but also in a contracting state, and

edges of the folded portion of each of said ridge-like folds and valley-like folds are shaped to be angled.

8. The fluid apparatus having a bellows according to claim 7, wherein an inclination angle of said lower lamella portion in the contracting state of each of said ridge-like folds is set to 1 to 45°.

9. The fluid apparatus having a bellows according to claim 7, wherein an inclination angle of said lower lamella portion in the contracting state of each of said ridge-like folds is set to 5 to 15°.

10. A fluid apparatus for a semiconductor producing apparatus having a bellows configured as an accumulator and placed in an accumulator body, said bellows made of polytetrafluoroethylene including extending and contracting portions configured by forming ridge-like folds and valley-like folds in a vertically alternate and continuous manner, which are extendingly and contractingly deformable in an axial direction, said axial direction defining a vertical axis; a liquid chamber inside said bellows and an air chamber outside said bellows, an inflow port and an outflow port formed in an inner bottom face of said accumulator body facing said liquid chamber; wherein:

a liquid pressure in said liquid chamber balances with an air pressure in said air chamber;

said extending and contracting portion of said bellows is formed into a shape in which a lower one of upper and lower lamella portions of each of said ridge-like folds is inclined

downwardly toward said vertical axis, not only in an extending state but also in a contracting state; and

edges of the folded portion of each of said ridge-like folds and valley-like folds are shaped to be angled.

Q1 11. The fluid apparatus having a bellows according to claim 10, wherein an inclination angle of said lower lamella portion in the contracting state of each of said ridge-like folds is set to 1 to 45°C.

12. The fluid apparatus having a bellows according to claim 10, wherein an inclination angle of said lower lamella portion in the contracting state of each of said ridge-like folds is set to 5 to 15°.

IN THE ABSTRACT:

Please amend the abstract as follows:

--ABSTRACT

Q8 A bellows that is extendingly and contractingly deformable in the axial direction is placed in a pump body and forms a liquid chamber inside the bellows. A suction portion and a discharge portion are formed in an inner bottom face of the pump body facing the liquid chamber. Liquid is sucked from the suction port into the liquid chamber by extension of the bellows, and the liquid in the liquid chamber is discharged from the discharge portion by contraction of the bellows. The extending and contracting portion of the bellows which is configured by forming ridge-like folds and valley-like folds in a vertically alternate and continuous manner is formed into a shape in which the lower one of upper and lower lamella portions of each of the ridge-like folds, or the lower lamella portion is inclined downwardly toward the axis defining the axial direction,